

ABSTRAK

Beberapa permasalahan geoteknik seperti kegagalan daya dukung pondasi dan kelongsoran lereng terjadi di atas tanah *mudrock*. Uniknya, *mudrock* memiliki tingkat durabilitas yang sangat baik pada kondisi tertimbun alami. Namun, dalam kondisi terbuka dan terpapar atmosfer dan hidrosfer, *mudrock* mengalami pelapukan, terdegradasi dan durabilitasnya menurun drastis. Pengujian *slake durability* dilakukan untuk mengetahui tingkat ketahanan *mudrock* terhadap faktor-faktor pelapukan. Tingkat ketahanan *mudrock* tersebut dinyatakan dalam *Slake Durability Index* (Id). Usaha perbaikan durabilitas *mudrock* dilakukan dengan menambahkan semen sebagai bahan stabilisasi. Hasil pengujian menunjukkan bahwa penambahan semen memberi pengaruh peningkatan durabilitas terhadap *mudrock* selama diberi perlakuan siklus pembasahan dan pengeringan. Nilai Id pada siklus ke-5 untuk *mudrock* dengan penambahan semen menunjukkan angka 61,37%. Terdapat selisih angka sekitar 61,12% dengan nilai Id siklus ke-5 *mudrock* tanpa semen yang menunjukkan angka 0,25%.

Kata-kata kunci : Pelapukan, *mudrock*, durabilitas, *slake durability index*, semen.

ABSTRACT

Some geotechnical problems such as foundation support capacity failure and slope sliding occur on mudrock soils. Uniquely, mudrocks have excellent durability levels under natural hoarded conditions. However, under open and exposed atmospheric and hydrosphere conditions, mudrocks are much weathered, degraded and their durability decreases dramatically. Slake endurance testing was performed to determine the level of resistance of mudrock to weathering factors. The mudrock resistance level is expressed in the Slake Endurance Index (Id). Efforts to improve mudrock durability are done by adding semen as a stabilizing agent. The experimental results showed that the cement had an effect on the durability of the sludge during the wetting and drying cycle. The value of Id in the 5th cycle for mudrock by mentioning the cement shows the number 61.37%. Number of difference of about 61,12% with the value of Id cycle 5 mudrock without cement showing the number 0,25%.

Keywords: Weathering, mudrock, durability, slake durability index, cement.